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Declaration under Rule 4.17:

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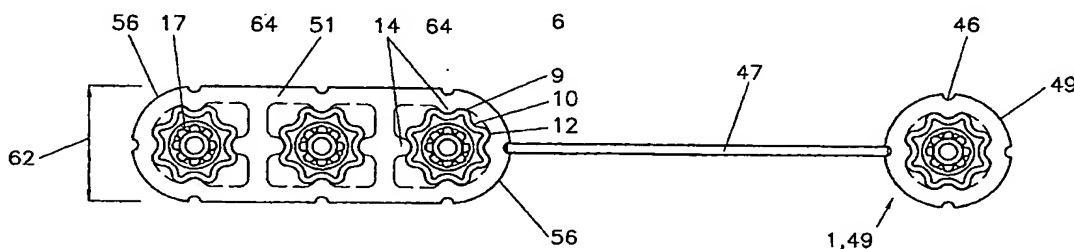
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: TOY BUILDING BLOCK



(57) Abstract: A toy building block (1) for stacking is provided on top (4) with one or more studs (3) and in the bottom (7) with recesses (6). The studs (4) show a toothwheel-like cross-section with rounded teeth crests (12) and rounded grooves (10) between the teeth (12) as well. The recesses (6) are provided each with a number of vertically extending lands (14) matching in shape the grooves (10). The studs easily slide in and out of the recesses (6), yet a rotational arretation of low play is obtained. Preferably, the building blocks are produced by a blowing process and may be provided with screws (21) for a safe interconnection. External slots (46) may allow the combination with panels (47) bearing images, additional functional elements etc.

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INTERNATIONAL SEARCH REPORT

International Application No

PC 1/002004/000198

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A63H33/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 129 605 A (BRADY CHRIS ET AL) 10 October 2000 (2000-10-10) column 7, line 59 - column 8, line 22; figures -----	1-6
A	US 5 795 210 A (KUSHNER PHILIP MARSHALL ET AL) 18 August 1998 (1998-08-18) column 2, line 66 - column 3, line 42; figures 1-4 -----	1-6
A	GB 2 136 700 A (HORNBY HOBBIES) 26 September 1984 (1984-09-26) abstract; figures -----	1-6
A	DE 42 12 492 A (FRENZEL HOLGER DR) 22 October 1992 (1992-10-22) column 5, line 24 - line 51; figure 6d ----- -/-	1-6

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

25 October 2004

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INTERNATIONAL SEARCH REPORT

International Application No

PL, 2004/000198

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 551 110 A (SELVAGE CRAIG C ET AL) 5 November 1985 (1985-11-05) column 4, line 52 - column 5, line 36; figures -----	7,8,10, 12-16

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CH2004/000198

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

As a result of the prior review under R. 40.2(e) PCT,
all additional fees are to be refunded.

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6,9

1.1. claims: 1,2-6

Toy building block with toothwheel-like studs and corresponding recesses. Solving the problem of avoiding rotation.

1.2. claims: 1,9

Toy building block manufactured by blowing. Solving the problem of manufacturing the block.

2. claims: 1,10

Toy building block with slots for holding edges of panels. Solving the problem of securing panels.

3. claims: 1,11

Toy building block that is bivalent consisting of a block having only recesses and a stud in form of a piece insertable into the recess. Solving the problem of choosing where to providing studs.

4. claims: 1,7,8,12-16

Toy building block with a pass-through hole with thread so that blocks may be screwed together, in order to solve the problem of better securing blocks to eachother.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6129605	A	10-10-2000	WO 9916524 A1	08-04-1999
US 5795210	A	18-08-1998	DK 106493 A	23-03-1995
			AT 161432 T	15-01-1998
			AU 672926 B2	17-10-1996
			AU 7652594 A	10-04-1995
			DE 69407594 D1	05-02-1998
			DE 69407594 T2	20-05-1998
			WO 9508376 A1	30-03-1995
			DK 710143 T3	14-04-1998
			EP 0710143 A1	08-05-1996
			ES 2111954 T3	16-03-1998
			HK 1004596 A1	27-11-1998
			JP 9504711 T	13-05-1997
			NZ 273290 A	24-02-1997
			SG 82548 A1	21-08-2001
			TR 27911 A	11-10-1995
GB 2136700	A	26-09-1984	NONE	
DE 4212492	A	22-10-1992	DE 4212492 A1	22-10-1992
			DE 9218687 U1	23-02-1995
US 4551110	A	05-11-1985	AU 4281785 A	28-11-1985
			BR 8502403 A	21-01-1986
			DK 216385 A	25-11-1985
			EP 0162730 A2	27-11-1985
			ES 8702798 A1	01-04-1987
			FI 852044 A	25-11-1985
			JP 60256481 A	18-12-1985
			ZA 8503761 A	30-12-1986